

MINISTRY OF HEALTH

CENTRAL HEALTH SERVICES COUNCIL

REPORT OF THE SUB-COMMITTEE
ON THE
**Hospital Pharmaceutical
Service**



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STANDING PHARMACEUTICAL ADVISORY
COMMITTEE

SUB-COMMITTEE ON THE HOSPITAL
PHARMACEUTICAL SERVICE

MEMBERS

Sir HUGH LINSTEAD, O.B.E., F.P.S., M.P. (*Chairman*)

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Miss J. ALLEN, F.P.S.

Alderman A. F. BRADBEER, J.P.

*D. CURRY, Esq., M.P.S.

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W. TRILLWOOD, Esq., F.P.S.

J. H. WOOD, Esq., M.P.S.

Mr. T. C. L. NICOLE } *Joint Secretaries.*

Miss M. E. HAMMOND }

* Died during the course of the investigation.

CENTRAL HEALTH SERVICES COUNCIL

The Hospital Pharmaceutical Service

INTRODUCTION

We were appointed on 2nd November, 1951 with the following terms of reference:—

“To review the arrangements for the provision of pharmaceutical services in hospitals and to advise on the most efficient and economical organisation of those services”.

We have met 14 times and received evidence either written or oral from the organisations and individuals named in Appendix 1.

We visited the hospitals and Groups named in Appendix 2, selecting them in consultation with the staff of the Ministry so that we might see a fair sample of different types of hospitals in different parts of the country. In all our visits we were received most kindly and hospitably, chairmen and members of Management Committees and Boards of Governors sparing much time to discuss their problems with us and to answer our questions. We are particularly indebted to the pharmacists of these hospitals and to the secretaries and other administrative officers for the time and trouble which they took to supply us with information and statistics. These visits contributed substantially to the shaping of our conclusions but in framing our report we have drawn also upon our individual experience of hospital pharmacy and of the hospital service generally.

Our terms of reference were wide and it took us a little time to get our bearings. In the pharmaceutical service, as no doubt elsewhere in the hospital world, there is at present a lack of accurate information and statistics at the centre and a valuable feature of the National Health Service Act, 1946 is the opportunity which it provides to enable sections of the hospital service to be reviewed for the first time on a national basis.

We found that some of the problems which we were examining were not restricted to pharmacy. They occur also in other sections of the service and involve consideration of general matters such as the organisation of Groups and Regions. It was also quickly obvious to us that the immense variety of local conditions make any standard pattern for the pharmaceutical service unrealistic except on very broad lines. Much depends upon the constitution of Groups. Some unification of the pharmaceutical service can be undertaken with advantage in every Group and where the hospitals in a Group form a natural unit unification can be carried to the stage where all members of the staff are part of one organisation. This may be neither easy nor desirable however in a Group which has little unity beyond the geographical situation of its hospitals. Any pattern of organisation for pharmacy, therefore, as for any other section of the service, must be flexible and adaptable to local needs and resources.

There were widely differing standards in the hospitals which we visited, but even in those where the pharmaceutical service was least developed we found a desire for information and help. Indeed, one of the main objects of this report must be to bring to the authorities of such hospitals the

knowledge which they are seeking of the needs and potentialities of a modern pharmaceutical department and of the contribution it can make to efficiency and to economy provided those in charge are given their opportunity.

We desire to express our particular thanks to the officials of the Ministry of Health who have helped us in our work. Dr. H. Davis, Chief Pharmacist to the Ministry, attended many of our meetings and contributed to our discussions from his personal experience of hospital pharmacy. Mr. Fawcitt brought us experience gained in recent visits to hospitals throughout the country. Mr. Sargent assisted us at our latest meetings. Our particular thanks are due to our two secretaries, Miss M. E. Hammond and Mr. T. C. L. Nicole. Miss Hammond has been responsible for the minutes of our meetings and for the arrangements for our journeys. Mr. Nicole brought with him a wide knowledge of the hospital service and of developments in other sections than pharmacy. One of his major contributions to our work was his ability to focus our attention upon the main questions of principle and policy which we needed to face. We are most grateful to them both for their services.

HUGH LINSTEAD

Chairman.

THE DEVELOPMENT OF HOSPITAL PHARMACY

1. The predecessor of the present day hospital pharmacist was the hospital apothecary of the eighteenth and early nineteenth centuries. He was sometimes qualified by experience only, more frequently he was a licentiate of the Society of Apothecaries of London, Edinburgh or Dublin. His duties varied in different hospitals, but broadly speaking combined those of resident medical officer and pharmacist. Sometimes administrative duties equivalent to those of a hospital secretary were added, as for example at the Royal Infirmary, Edinburgh, where about 1740 "Mr. Petrie and Mr. Sutherland assumed the twofold duties of Clerk and Apothecary, serving alternately in these posts, each with an annual salary of £10". There has been an interesting modern parallel to this at the London Hospital, where the late Sir Ernest Morris was at first Pharmacist and afterwards House Governor.

2. At the Manchester Royal Infirmary in 1752 the duties of the Apothecary comprised recording case notes for the physicians and surgeons as well as visiting the wards daily and furnishing a weekly return of the drugs used. He was incidentally under a special injunction to ensure that the Matron always knew where he was to be found. Before the end of the century, both at Manchester and at Edinburgh, the Infirmarys opened shops for their apothecaries at which the patients bought their medicines and over which the apothecaries were required to lodge. Nevertheless the greater part of the duties of the apothecary lay in the medical field and the next stage in the development of pharmacy in hospitals is well illustrated by the change effected in 1850 at Manchester Royal Infirmary when the office of "House Apothecary" was discontinued, a resident medical officer took his place and a "Dispenser of Medicine" was appointed to work in the dispensary under the supervision of the medical officer. These brief examples illustrate how the original development of the pharmaceutical service in hospitals was checked when the apothecary obtained recognition as a general practitioner of medicine and explain why hospital pharmacy had to make a fresh start in the middle of the last century. With the advent of a national hospital service a significant opportunity is now presented not only for hospital pharmacy itself to take a substantial step forward but also for those in authority to aid it to do so and to recover some of the leeway lost after its early check.

Hospital Pharmacy To-day

3. The variety we found in the pharmaceutical departments which we visited indicates that there is no simple picture of present day hospital pharmacy. Its development has depended upon the enthusiasm of individuals or the adoption of enlightened policies of administration within individual hospitals. We saw examples of most stages of this development. At one end of the scale there were highly efficient departments run upon a basis of scientific knowledge and business efficiency, at the other, venerable dispensaries in which the pharmacist was still regarded as the "dispenser" of the old days of the Poor Law. We found, too, a great variety in standards of staffing. In some hospitals there is a rigorous adherence to a rule that all pharmaceutical operations, however simple, shall be performed by pharmacists, while in others substantial reliance is placed on assistants working under pharmaceutical supervision. Accommodation varies from a suite of laboratories and rooms planned and designed as a pharmaceutical department down to miserable drug-rooms sited in some space required for no other purpose and apparently chosen with little regard either to accessibility by patients or to the convenience of the staff. We found several departments made up of rooms scattered in different parts of a hospital, obviously causing loss of time and efficiency and the needless expenditure of energy in fetching and carrying. The scope of the work expected from the staff of a pharmaceutical department is far from uniform. It may comprise only pharmaceutical operations or it may include in addition such services as syringe sterilisation, some biochemical analysis, lecturing to medical students and student nurses and the purchase, storage, care and issue of surgical instruments. The position of the pharmaceutical department in the organisation of a hospital also varies through wide extremes. It may be recognised as a self-contained unit responsible through the chief administrator to the Governing Body, or the pharmacist may be regarded as someone with no administrative responsibilities.

4. These wide variations in policy and practice are correlated to some extent with the size of the hospital. This is, however, by no means always the case and one of the largest hospitals which we visited was an example of the weaknesses which result from tardy development. We formed the opinion that hospitals associated with schools of medicine take the more enlightened view of departmental freedom and responsibility and reap the corresponding benefits. In some hospitals development is rendered almost impossible by physical limitations while in others it may be that a long tradition has produced circumstances which it is beyond the power of the pharmaceutical staff to alter. In some again the staff may find difficulty in adapting themselves to greater freedom and wider responsibility. Nevertheless, in many of the less developed hospitals there are pharmacists chafing under their present limitations and eager for opportunities of improving the services which their department can render. Where an unsatisfactory situation exists it is often because it has never been brought squarely to the attention of the Governing Body. We would emphasise that in many hospitals improvement is not a question, at any rate in the first instance, of increased expenditure. Often it would not be necessary to do more than follow the example of the best hospitals by releasing the pharmacist from dependence on others, giving him the necessary authority to provide the service which he knows to be required by the hospital and ensuring him unimpeded access through the appropriate channels to the Governing Body.

5. This summary necessarily emphasises the less satisfactory aspects of the hospital pharmaceutical service as it is to-day. As much and more could

be said in praise of the many excellent departments which we saw and of which we know. It is a matter for congratulation that so many of the pharmacists in our hospitals are providing a first-class service in circumstances which are often discouraging.

THE SCOPE OF HOSPITAL PHARMACY

6. We have indicated that the functions performed by pharmacists and pharmaceutical departments at the present time vary from hospital to hospital within wide limits. We adopt as our own definition of the scope of hospital pharmacy that proposed by the Pharmaceutical Society of Great Britain in their memorandum to us, with minor modifications. In our view the work of the pharmaceutical department of an individual hospital, excepting any functions which may be appropriately carried out by the Group (See paragraphs 14 and 18 to 20 below), should be:—

(1) to be responsible for the provision, nature and quality of drugs, medicinal preparations, dressings, chemicals and pharmaceutical sundries ;

(2) to ensure that during their storage in hospital, the potency and quality of all these items are maintained ;

(3) to obtain the equipment necessary for the efficient and economical working of the pharmaceutical department ;

(4) to make preparations to be used in dispensing prescriptions ; to prepare other products for medical or surgical use ; and to devise formulae to meet special needs ;

(5) to dispense prescriptions ;

(6) to investigate pharmaceutical problems arising in the use of medicaments ;

(7) to assist in the development of new methods of treatment ;

(8) to promote economy in the use of medical supplies ;

(9) to assist in efficient prescribing by advising upon the nature and properties of medicaments and upon the selection of the most suitable substances and the form in which they should be prescribed ;

(10) to instruct or advise on the instruction of those whose duties involve the handling of the material provided by the department ;

(11) to provide all necessary facilities for pharmaceutical students to obtain a comprehensive training in every aspect of the department's work.

We would also draw attention to the fact that the Pharmacy Acts and the Dangerous Drugs Act impose certain statutory responsibilities upon pharmacists in hospitals.

7. This summary comprises broadly the functions to be performed by the chief pharmacist of a hospital and his department. There are nevertheless other functions which in some hospitals have been allocated to the Pharmaceutical department. The allocation may have been made because an individual pharmacist happened to possess special technical knowledge and experience, or because there was no other appropriate place for them in the organisation. It has often been found convenient to place a service such as the purchase, care and issue of surgical instruments under the general supervision of the chief pharmacist, particularly in a hospital or Group where the amount of work involved may not be large enough to justify the setting up of a special organisation. This may be convenient but it may seriously prejudice the essential duties for which he has been appointed.

Any development tending to make him a medical stores officer with responsibility for such items as X-ray materials, surgical instruments and medical and surgical equipment is to be deprecated. As an example, at one hospital which we visited the pharmacists was occupied with routine store-keeping of this kind to the extent that he gave less than one-third of his time to his pharmaceutical duties. Where there is no practicable alternative to assigning such extraneous activities to the pharmaceutical department, the chief pharmacist should be given sufficient assistance to ensure that he does not have to spend an undue amount of his personal time on the details of the work.

A syringe sterilisation service is in a different category because it requires a detailed knowledge of aseptic technique. In many hospitals of a size sufficient to justify the setting up of a central syringe maintenance unit, the volume of work would probably justify the appointment of technicians but we would only emphasise that where it is thought desirable to place the responsibility for this service on the pharmacist, he must be given the necessary skilled help to relieve him from all except supervisory work.

THE POSITION OF PHARMACY IN THE ADMINISTRATIVE STRUCTURE

8. It is important to recognise that pharmacy is a science and an art of its own. It lays other sciences under contribution, but it is in no way subordinate to them. In those British Universities in which pharmacy is a subject of study it forms a department of its own, usually with its own professor or professors. It embraces a recognised field of knowledge and of practice and it requires for its healthy development the primary condition that effective advice and decisions upon pharmaceutical matters shall be in the hands of pharmacists. We have therefore given some consideration to the place of pharmacy in the Ministry of Health itself and in the Regions, Groups and individual hospitals.

The Ministry

9. The Ministry has a Chief Pharmacist and a pharmaceutical section and there are pharmacists also in the drug production and inspection branches of the Supplies Division of the Ministry. Our own opinion and all the evidence at our disposal suggests that this is a highly satisfactory arrangement and the fact that such views are generally held is a tribute to the work and personalities of the pharmaceutical staff. Our only concern is a doubt whether the fullest use is being made of this excellent team as advisers on professional questions at the different levels in the Health Service. This may be because Regions and Groups do not know that the section is at their service. If so, then they should be informed by appropriate publicity.

The Central Health Services Council

10. The National Health Service Act, 1946* provides that two members of the Central Health Services Council are to be pharmacists. Among the committees of the Council is a Standing Pharmaceutical Advisory Committee, of which we are a Sub-Committee with co-opted members. The Standing Advisory Committee comprises pharmacists drawn from every section of the profession and industry together with lay members and seems to provide a satisfactory forum for the discussion of pharmaceutical problems and for

* First Schedule S. 1(h).

formulating advice to the Council and to the Minister. There is no limit to the number of its members. Witnesses have however told us that the limit of two pharmacists on the Central Health Services Council makes it difficult for all the recognised sections of pharmacy to be represented there. To increase the number of pharmacists would require an amendment of the Statute and if the present composition of the Council were to be altered there would undoubtedly be other claims. The representations have been made to us with some force but we are not satisfied that in present circumstances an increase in the number of pharmacists on the Council is needed.

Regional Boards

11. We are satisfied that Regional Hospital Boards need pharmaceutical advice and have no ready means of obtaining it at present. It may be that pharmaceutical problems rarely appear on the agendas of Boards, but that is because there is no channel through which they can readily reach a Board. They certainly exist, for our visits have shown us how wide is the variation between the standards of pharmaceutical departments in different hospitals and how much work must be done to bring up the poorest to the level of the best. In each Region a channel of communication between the Board and the pharmacists working in the Region is needed. This will enable the Board to obtain advice on pharmaceutical problems and the pharmacists to send reports and suggestions through to the Board. In other words Regional Hospital Boards require permanent advisory machinery on pharmaceutical matters. The large size of some Regions might make more than one committee desirable. In one or two Regions at present the pharmacists have formed such a committee and one Regional Hospital Board has made considerable use of its services.

12. We therefore suggest that each Regional Hospital Board should appoint now a Pharmaceutical Advisory Committee with the duty of advising the Board, on request or on its own initiative, upon pharmaceutical matters of Regional interest. It should be predominantly pharmaceutical in composition, and the pharmacists should be so selected as to be representative of the Region geographically and also of the different types of hospitals. Its members should include one or more medical men, a person experienced in hospital administration and members of management committees or boards of governors. One of the pharmacists should be chosen by the committee as the person to whom the board would turn for advice on day to day problems, should occasion require.

13. Whatever may be the final pattern of a pharmaceutical advisory service to Regional Hospital Boards, there is clearly a need for repeating now on a regional basis the sort of investigation we have made nationally. There are at the present time in every Region marked inequalities in the pharmaceutical service. Some hospitals, through lack of accommodation, shortage of trained staff or a lack of organisation, are making do with a sub-standard service. There may be others staffed over-elaborately or by reason of excessive manufacturing or for other causes providing an unnecessarily extravagant service. In many groups, we are certain that there are problems which it is difficult to solve within the group itself and which require investigation by some more broadly based authority. We therefore consider that it is important that every Region should, in the near future, have its pharmaceutical service surveyed with a view to deficiencies being brought to light, the standards throughout the Region levelled up so far as possible, and the attention of Management Committees and Boards directed to needed improvements. It is particularly important to provide a means whereby suggestions

from the pharmacists of the hospitals themselves can be examined and informed views on them presented to Regional Hospital Boards. Such a review should be one of the first tasks of the Advisory Committee referred to in the preceding paragraph, acting if necessary through sub-committees which may have members added to them for this specific task. The sort of questions to which they should direct their attention on a regional basis are those which we have been examining in relation to the service as a whole. Such a survey will take time, but it will amply repay the effort by improvements in the efficiency and quality of the pharmaceutical services and by economies.

Groups

14. The fundamental change in the organisation of hospitals introduced by the National Health Service was the amalgamation of a number of units into a Group. The Group is the administrative unit of the Service and it is the duty of Governing Bodies to develop the services of the individual hospitals upon a Group basis wherever that can be done with efficiency and economy. Traditions and local loyalties which have developed around individual hospitals must gradually be merged into a loyalty to the Group. Such a development calls for an organisation operating in part vertically from the Group to the individual hospital and in part horizontally for functional services such as engineering and maintenance, which can be made available partly or wholly from a central source for all units of the Group. (We are, of course, aware that there are Groups comprising one hospital only, where these remarks have little application.)

15. We give below a general indication of the position which, in our view, the pharmaceutical department ought to occupy within the Group and within the individual hospital. The manner in which this can be secured, however, depends upon the general administrative structure of the hospital service. We therefore set out here our conception of the type of administrative structure which the Group system seems to require, and which can provide the essential freedom of the pharmaceutical department while at the same time setting it in its proper place in the administrative scheme of the Group and of the hospital.

The Administrative Chain

16. There are three clearly distinguishable spheres of activity in a Group—medical, nursing and economic (by which is meant the business management and hotel-keeping side of the enterprise). Each of the three has its own specialised techniques and within its own professional field each has complete responsibility. These three must work closely and harmoniously together and each of them will only give of its best if co-ordination is achieved by co-operation and understanding, rather than by directions and orders. It is the particular responsibility of the Group Secretary, as the executive officer of the Board or Committee, to secure this co-ordination. The Group Secretary has, therefore, the dual role of administrator and co-ordinator. In the first, like any other departmental head, he controls directly the activities of the staff for whom he has administrative responsibility. In the latter role, he proceeds by discussion, persuasion and compromise, keeping the authority of his Board or Committee in the background. A Group is fortunate in its secretary and a secretary fortunate in his colleagues, where these frontiers of administration and co-ordination have merged imperceptibly into one another.

The Pharmaceutical Department in the Unit Hospital

17. In addition to these three, there are other activities, neither medical nor nursing, within a Group or hospital which need to be given the fullest possible autonomy if they are to make their maximum contribution to the service. The most important criterion for identifying one of them is whether it represents a recognised section of scientific, technical or professional activity with its own techniques which it exercises according to its own standards. Sir Harold Boldero, speaking on behalf of the Royal College of Physicians, told us that the College "had no doubt that the pharmacy was a department of the hospital in its own right". We have already indicated why we concur in this view and why it is essential that in the individual hospital, and also in any Group organisation, the pharmaceutical department shall be an entity under its own pharmaceutical head with uninterrupted access through the secretary (or Medical Superintendent where he is the senior administrative officer) to the management of the unit hospital, to the Group pharmaceutical authority, if there is one, and ultimately to the governing body. We noticed during our visits that where there is a flourishing pharmaceutical department making a marked contribution to the service of the hospital, it is usually a department recognised as an independent unit and as equivalent in standing to other independent departments of the hospital. It was where the department had no sort of independent status—where, for example, it was not considered necessary to consult the chief pharmacist in advance about the removal of his department from one place to another, or about the architect's plans for rebuilding a dispensary, or where a chief pharmacist was neither consulted about the estimates for drugs and dressings nor kept informed of the run of his expenditure (and we met such cases)—that we found a static department rendering the minimum of service and with no opportunity or authority to propose developments or economies. Inevitably we left such hospitals with an unfavourable impression of their administration.

Group Organisation of Pharmacy

18. No general scheme of Group organisation for pharmacy can be laid down which can have a very wide application. In some Groups it will be possible to create a Group pharmaceutical organisation. In others it will be possible to do little more than to arrange Group contracts for some pharmaceutical supplies. Where a number of Groups are geographically close, collaboration between them is to be encouraged. The comparatively small number of pharmacists at present in the hospital service is important as a limiting factor. The average is less than three per Group. Nevertheless, it is implicit in the system that integration of a service such as pharmacy should be taken as far as is practicable in every Group. With this in mind, we consider that every hospital, however small, ought to have its own pharmacist. This does not mean that every hospital requires the full-time services of a pharmacist. In many that is unnecessary, but in every hospital, however small, the responsibility for the pharmaceutical service, even if it is no more than a cupboard of drugs, should be assigned to a pharmacist. He would be "The Pharmacist" to that hospital. He would normally be a member of the staff of the Group, but in isolated districts he might be a local pharmacist attached to the hospital for this purpose.

19. The Institute of Hospital Administrators recommended that pharmacists should be appointed to the hospital Group and not to the individual hospitals. We recognise that this proposal is intended to secure a desirable flexibility in the staff. It is however strictly applicable only after the pharmaceutical service in a Group has been unified. Where this has not been achieved, appointments will normally be made to a particular hospital. But

it should be a condition that the person appointed may be required to serve in any of the hospitals of the Group, provided that local circumstances do not make this unreasonable.

20. In every Group, it is necessary to arrange for pharmaceutical advice to be available to the governing body and for the chief pharmacists of the hospitals of the Group to meet to discuss the pharmaceutical arrangements of the Group such as for example those relating to staff, supplies or manufacturing. We therefore consider that every Group should have consultative machinery, whether it be a committee or something less formal, to provide facilities for the chief pharmacists of the Group to discuss pharmaceutical matters. One of the chief pharmacists chosen by his colleagues should represent them at meetings of the governing body or its committees at which pharmaceutical questions are to be discussed. This pharmacist will naturally be referred to by the Group Secretary or by the governing body for advice on day to day matters concerning the pharmaceutical work of the Group. In every Group where it is practicable to do so, the aim should be to integrate the pharmaceutical activities into one Group service under a Group Chief Pharmacist, and it is important that the terms of service for this grade should be determined by the Whitley Committee. In fact, if not always in name, a number of these appointments have already been made, although the holders receive no financial recognition for their additional responsibilities. We emphasise below the importance of maintaining the authority of the chief pharmacist of the individual hospital as fully as is possible alongside the steady development of the service on a Group basis.

Chief Pharmacists of Individual Hospitals

21. We have already emphasised that in no two hospitals are the needs and problems identical. The methods of treatment favoured by the medical and surgical staff vary, the physical conditions within the buildings limit what can be done, historical development and traditions cannot be ignored and the financial circumstances of each hospital impose their special limitations. Because there can be no national pattern for the hospital pharmaceutical service and because the problems of each Group and hospital must be dealt with individually, it is essential to have at the head of a pharmaceutical department someone with the ability and authority to adapt staff, accommodation and services to the conditions, needs and opportunities of the institution. It is therefore important that the post of chief pharmacist to a hospital shall be made sufficiently attractive to recruit and retain the best type of pharmacist. Financial inducements are not everything, but it must be recognised that the salaries offered at present are insufficient to attract enough pharmacists of the quality which the service requires. Almost more important than the question of salary is that of status, with which goes responsibility. The hospital service will not attract good men unless it can offer them opportunities for a satisfying professional life. In some hospitals these opportunities are not being provided to-day and the service generally is suffering in consequence. An efficient service economically run is only likely to be achieved where the chief pharmacist has sufficient authority to run his department in accordance with what he knows to be good pharmaceutical standards and where he is expected and encouraged to approach the authorities of the hospital with proposals for changes or developments with some assurance that they are reasonably likely to be carried into effect if resources permit. It should be the aim, therefore, when creating a Group pharmaceutical service, to leave as great a measure of freedom as possible to the chief pharmacist of the individual hospital.

22. We would particularly record the need for special consideration to be given to the qualifications of those appointed to the headship of the pharmaceutical departments of all large hospitals especially but not exclusively those associated with teaching schools. A man appointed to such a post should have the personality and qualities which will enable him to offer, with authority, pharmaceutical advice throughout the institution, and the capacity for original thought which will enable him to undertake technical investigations and co-operate in medical research. There is an obligation upon governing bodies to reciprocate by ensuring that the chief pharmacist is provided with the time and facilities for scientific work, for collaboration with the medical staff and for the planning, organisation and the supervision of his staff with an eye to long term policies rather than day to day work. We have had ample evidence during the course of our visits, and we know from our own experience, that where these conditions have been fulfilled there the hospital benefits both in efficiency and economy. If we had one recommendation only to offer for the improvement of the pharmaceutical service in any hospital it would be that the head of the department should be selected with the greatest care and should then be given freedom to develop it according to his own ideas and ideals.

CONCLUSIONS—I: ADMINISTRATION

23. It is convenient at this point to summarise certain conclusions at which we have arrived in the light of our visits, of the evidence we have received and of our own experience of the hospital service.

(1) Pharmacy forms a distinct section of the hospital service with its own field of professional practice and techniques where decisions of policy require to be taken in the light of pharmaceutical advice and within which administration should be in the hands of pharmacists.

(2) Appropriate means for this purpose are needed at the different levels of the National Health Service—the Ministry, Regions, Groups and individual hospitals.

(3) Arrangements should be made for chief pharmacists to meet from time to time to discuss pharmaceutical matters.

(4) Every hospital however small, ought to have its own pharmacist even if his responsibilities entail no more than an occasional visit.

(5) In every hospital where the pharmaceutical service is sufficient to justify the employment of at least one pharmacist full-time, he should be the head of his department and directly responsible, either through the Group pharmaceutical organisation if there is one or through the normal administrative channels as defined in paragraph 17, to the governing body.

(6) Where circumstances are favourable, it may be appropriate to unify the whole of the pharmaceutical service of a Group and place it under the administrative control of a Group Chief Pharmacist. Provision should be made for a salary scale for this grade. Where unification is not currently possible, progressive steps in that direction should be taken as circumstances permit.

(7) Wherever the work of the pharmaceutical department is likely to impinge upon other sections of the hospital's activities appropriate liaison machinery should be devised. It is of course particularly important that the relations with the medical staff of the hospital should be close.

THE QUALIFICATIONS OF STAFF

24. The Pharmacy and Poisons Acts and the Dangerous Drugs Act, together with the Statutory Rules made under them, contain certain provisions applying to hospitals where there are pharmacists and other provisions applying where there are not. The National Health Service Act, 1946 gives power to the Minister to prescribe qualifications for persons employed in the Service but this power has not been applied to the staff of the pharmaceutical service. Generally speaking it is an accurate summary to say that there is no activity of the pharmaceutical department of a hospital which by statute can only be undertaken by a pharmacist. The increasing employment of pharmacists in the hospital service during recent decades has arisen independently of statutory requirements.

Pharmacists

25. At present there are approximately 1,165 whole-time and 134 part-time pharmacists employed in hospitals in the National Health Service. A pharmacist is a person whose name appears in the Register maintained in accordance with the provisions of the Pharmacy Acts. The qualifications entitling to registration are those granted by the Pharmaceutical Society of Great Britain, and subject to certain conditions, the Degree in Pharmacy of certain universities and the qualifications granted in certain Dominions and foreign countries. The minimum period of training required of a pharmaceutical student in Great Britain is four years, of which three are spent in academic studies and one in gaining practical experience. Registration as a pharmacist is therefore a guarantee of competence in the pharmaceutical field and also provides evidence of skill and knowledge available for other technical activities of a kindred kind in a hospital.

Shortage of Recruits

26. As has been mentioned above, all pharmaceutical students are required to obtain practical experience of pharmacy before registration. If they do so before passing the Qualifying Examination the minimum period is two years. If after, it is one year. Military service is usually performed at the end of this year. The hospital offers a field of particular interest to a student about to begin or having just completed his academic studies, especially for those attracted to the more scientific side of pharmacy. Furthermore it is a pensionable service with security of tenure. Nevertheless, hospital pharmacy is at present lamentably short of recruits. The Pharmaceutical Society estimate that at the end of 1952 there were approximately 880 pharmaceutical students receiving practical training in retail pharmacies as against 40 in hospitals. A larger proportion of the 100 other students who had chosen to receive their practical training between graduation and registration were probably in hospitals, but the total for the whole of Great Britain is unlikely to exceed 60.

27. This shortage may be traced to three main causes:—

(i) Salaries in the hospital service are low in comparison at one end of the scale with those paid to newly-qualified pharmacists in retail pharmacy and at the other end with those which can be earned in senior posts in industry. In consequence hospital pharmacy has a low "career value". The difference between the remuneration of new entrants into hospital pharmacy and that of those into the pharmaceutical industry (or for that matter other scientific pursuits), may not be great, but in the hospital service a pharmacist cannot hope to earn more than some £1,300 a year and even this figure, which includes fees for teaching, applies to probably

not more than ten posts in the whole of the country. Thus, the most that a new entrant can hope to do is approximately to double his starting salary by the time he retires. The majority must expect much less. The greatest encouragement would be a scale which offered worthwhile increases beyond the first five years of service.

(ii) The position of the pharmaceutical department in a hospital has often been ill-defined, at least until recent years.

(iii) There is ignorance both among students and in the profession generally of the interest to be found in hospital pharmacy. Where geography permits, chief pharmacists of hospitals should establish contacts with Schools of Pharmacy, not merely in order to encourage recruitment to the hospital service but also to provide opportunities for students taking an academic course to familiarise themselves with a side of professional activity and with techniques which might otherwise remain unknown to them. This would help to overcome the difficulty which we were told was experienced by some Schools of Pharmacy of finding posts in hospitals for post-graduate students. The hospital service provides exceptional opportunities to enable University graduates who prefer a scientific career to a commercial one to obtain their practical experience before registration. Chief pharmacists of hospitals should make opportunities for these students and Governing Bodies should encourage them to do so. There are also every year a number of young qualified pharmacists from Europe and elsewhere who seek experience in Great Britain for two or three months. The hospital service can render a useful service to international understanding by offering hospitality to these young men and women who may find it easier to adapt their knowledge to the conditions of hospital practice than to those of retail pharmacy. Such arrangements cannot be on a basis of man-for-man reciprocity but should certainly lead to the provision of similar facilities for British pharmacists seeking hospital experience abroad.

Anomalies in Salaries

28. In this connection we would draw particular attention to the unequal results which flow from the present method of classifying hospitals for salary purposes. The calculation is based on the number of beds and the number of out-patient attendances. It does not distinguish between a department which is actively co-operating with the medical staff along the lines which we have laid down elsewhere and one which limits its activities to the dispensing of prescriptions. In many cases it discriminates against the former type of department, a fact which, in view of what we have said earlier in this report, seems particularly unfortunate. It should be remembered that the "points system" is used not only to assess the salary of the chief pharmacist, but also that of his deputy. Moreover, it determines the grades of senior staff which may be employed. The small hospital with an active department suffers therefore not only because it cannot offer a salary sufficient to attract the right man to take charge of its pharmaceutical department, but also because his staff is limited to the two junior grades of pharmacist. The larger hospital often fares equally badly. It is obvious that in very large units, the senior staff, i.e. deputy and senior pharmacists, are bound to carry considerable responsibility. On their shoulders falls the duty of training new entrants who will eventually go out to senior posts in other hospitals. Yet they are subject to continued financial pressure to take posts where, because of anomalies in the points system, the responsibility is far less and the remuneration higher. It is accepted that the large departments are bound to be training grounds for the provision of candidates for senior

posts in smaller hospitals, but it is desirable for the stability of the hospital pharmaceutical service that large departments should be able to retain competent staff in the more responsible posts, without their being subject to the temptation to take more highly paid posts of lower responsibility. It should be axiomatic that the only post which should attract a competent deputy chief in a very large department should be a post of chief in a similar department, but this is far from the case at present.

29. The problem is to find a method which will enable remuneration to be based on the quality of the work of the pharmaceutical department, instead of as at present, purely on its quantity. This question should be investigated by the appropriate Whitley Committee along the lines that one of the tasks of the proposed Regional Pharmaceutical Advisory Committees will be to recommend to Regional Boards those posts in the Region deserving of upgrading or other recognition by reason of the special nature of the work undertaken in the Pharmaceutical Department.

Assistants in Dispensing

30. At the present time there are 610 persons employed whole-time and 98 part-time as assistants in dispensing in hospitals in the National Health Service. The Professional and Technical Council B of the Whitley Councils for the Health Services (Great Britain) in their Circular P.T.B.5 of 14th September, 1950, defined assistants in dispensing as "person whose duties consist substantially of the preparation and compounding of therapeutic agents, and the execution of prescriptions". A salary bonus was provided for an assistant in dispensing who holds one of the following qualifications:—

- "(i) The Certificate of the Society of Apothecaries of London.
- (ii) The Dispensing Certificate of the R.A.M.C. or R.A.F.
- (iii) A qualification approved by the Minister of Health or Secretary of State for Scotland as being equivalent to one of these qualifications.
- (iv) A certificate given by the employing authority that the dispensing assistant is fully qualified to perform the highest duties appropriate to the grade".

The Certificate of the Society of Apothecaries is granted upon examination to candidates who, having reached an approved standard of general education, have received not less than nine months' full-time training in the compounding and dispensing of medicines, in chemistry, and in materia medica and pharmacy, including the translation of prescriptions.

There are many other assistants working in hospital dispensaries. The group is a miscellaneous one including technicians highly skilled in a specialised branch of manipulation and porters who do odd jobs and make themselves generally useful.

Evidence of Witnesses

31. This is an important part of our enquiry and we therefore summarise the evidence in some detail. All witnesses with whom the matter was discussed agreed that there was a place in the hospital service for assistants, not only because it would be impracticable to staff it throughout with pharmacists but because to do so would be a grave waste of their knowledge, experience and training. There was however some difference of opinion of the nature of the training which the assistants should have.

32. The Institute of Hospital Administrators considered that it was imperative that some way should be found to relieve pharmacists of routine work

and suggested that it could be done by using unqualified assistants. Such assistants should work under the direct supervision of a pharmacist. The representatives of the Institute were uncertain whether a specific qualification should be required of such assistants. In their view the training should be left to the hospital employing them and need not include an academic course. The Institute considered that there would be a place for assistants with the certificate of the Society of Apothecaries in addition to these lower grade assistants mentioned above.

33. The Pharmaceutical Society expressed the following views in a memorandum:—

“The Council are of opinion that a national standard for persons acting as assistants to pharmacists is desirable. They consider that persons in this class should be regarded as general assistants. It is important that their role as assistants and only as assistants should be made clear and that no countenance should be given to their working in any other circumstances. Assistants can be employed on routine duties under the supervision of pharmacists. The degree of supervision will depend to some extent on the nature of the work but the minimum of control is that no work should be done which is not passed to an assistant by a pharmacist as suitable to be undertaken and which is not checked by a pharmacist before the resulting preparation is issued for use. It is not considered that all persons engaged in subsidiary duties need be trained and examined according to a national standard. Some can appropriately be employed on a narrow range of duties without such a test.”

34. The Guild of Public Pharmacists considered that there was a place for assistants in dispensing but felt that the training leading to the certificate of the Society of Apothecaries laid too much emphasis upon theory and was out of date. They considered that in addition technicians of the “factory hand” type were needed in the pharmaceutical departments of hospitals. They would be employed for the most part in larger departments and should receive their training in the hospitals where they were employed. The training would be almost entirely practical and no formal certificate of proficiency was necessary. These technicians should not be allowed to undertake work other than routine operations and should not be expected to act on their own initiative or responsibility. Their work could include the dispensing of routine stock mixtures.

35. Sir Harold Boldero representing the Royal College of Physicians said that the College considered that there was a place for the technician in the pharmaceutical department because in it there was much repetitive work which could be done by unqualified staff as was the case in pathology and nursing. Technicians could undertake routine and repetitive tasks where mistakes were unlikely but should certainly not be allowed to interpret prescriptions. They would be skilled, unqualified labour.

36. The representatives of the Society of Apothecaries drew a distinction between the technologist and the technician. In pharmacy they regarded the pharmacist as the technologist and the assistant in dispensing as the technician.

They held very strongly that there was a place for assistants in dispensing and pointed out that the Society had, since 1815, provided the only statutory certificate. At the same time, they agreed that changes should be made in the training syllabus, and they stated that a revised syllabus was already drafted. They were of opinion that it would be inadvisable to establish a

multiplicity of certificates. They considered that no dispenser should work without supervision but that the amount of necessary supervision varied. In their view, there might be three grades of assistants, i.e.:

- (i) The trainee-dispenser: a person of suitable general education, who would receive training from the technologist, i.e., the pharmacist.
- (ii) The certificated dispenser.
- (iii) The certificated dispenser who, with experience, had acquired skill above the average, would require less supervision, and would command higher remuneration.

The dispenser would pass from grade (ii) to grade (iii) upon the recommendation of the pharmacist to the Governing Body.

Selection of Staff

37. In relation to all the staff of the pharmaceutical department, the chief pharmacist should have a decisive voice in their selection. It is false economy to assume that any available labour can be allocated casually to the pharmaceutical department.

CONCLUSIONS—II: STAFF

38. We are satisfied that there is a need in the hospital pharmaceutical service for (1) the pharmacist, (2) the dispensing assistant and (3) the skilled hand, as well as unskilled porters and cleaners, and suitable clerical assistance (see paragraph 73 below).

39. As we have said, we consider that it is unnecessary to have a full-time pharmacist in every hospital. On the other hand, every hospital should be able to look to a pharmacist—who would usually be employed in the Group of which the hospital is a part—as the pharmacist responsible for the pharmaceutical work of that hospital.

40. We accept the view unanimously expressed by all our witnesses that the time has come in the hospital service to regularise the position of the dispensing assistant. He will therefore be, as the name implies, a person who will always act as an assistant to and work under the directions of a pharmacist. This should be clearly understood and should be reflected in his training and in the type of examination which he is required to pass. None of our witnesses suggested, and we reject ourselves, any form of recognition of the dispensing assistant which might be used in the future as an argument for his employment as a lower grade of pharmacist. He has his own important role, which can provide a satisfying career, given appropriate remuneration and conditions of service.

41. Those seeking to become dispensing assistants would enter as trainees either from school or from the grade of skilled hand. We should expect that in general they would be recruited from school, but in any case their training would take place in the hospitals and not in technical schools. Recognition as a dispensing assistant would be accorded to holders of a certificate such as that of the Society of Apothecaries or one of the Services. Such a certificate would be evidence primarily of proficiency in accurate practical work. It is desirable that there should be some form of national recognition for dispensing assistants so that they can be readily identified. We therefore consider that the Ministry of Health and the Department of

Health for Scotland should convene a conference representing the Pharmaceutical Society, the Guild of Public Pharmacists, the Society of Apothecaries and the Service Departments to consider:—

(a) the standard of skill required for a dispensing assistant in the hospital field ;

(b) the training and examination requirements needed to ensure it.

42. We do not consider that a certificate need be given to the skilled hand, nor is it necessary to differentiate precisely between different types. The requirements will vary between hospital and hospital and their status and salary should be determined in relation to the work they do. Although their field is restricted those who are highly skilled must receive adequate recognition and remuneration, because in their own way they may be more skilled than the Assistant in Dispensing.

THE TEACHING OF PHARMACY TO MEDICAL STUDENTS

43. The Royal College of Physicians in their Memorandum of Evidence referred to the need for close co-operation between the chief pharmacist and the Department of Pharmacology or Physiology when the pharmacist has the duty of instructing medical students in the elements of pharmacy. They added that he should have a recognised status in the medical school. An investigation of the teaching of pharmacy in the medical curriculum was undertaken in 1950 on behalf of the Board of the Faculty of Medicine of the University of London, and we reproduce by permission in Appendix 3 the report approved by the Board. We cannot usefully add to these opinions, but we would draw particular attention to the following paragraph with which we respectfully agree:

“ With regard to the scope of the subject, it is suggested that the medical student should not be greatly concerned with how drugs are compounded, or how prescriptions are dispensed, for that is the concern of the pharmacist. The subject should be taught from a prescriber's point of view and such teaching should be correlated with that of pharmacology, therapeutics and medicine, thus forming part of a general scheme ”.

NURSING AND PHARMACY

44. We received valuable evidence from the Royal College of Nursing about the needs of the nursing service in the pharmaceutical field. The help required from pharmacists relates to (a) training (b) organisation and (c) information. They put to us a number of problems with which the nursing profession is faced and we indicate in the following paragraphs the general lines upon which solutions should be sought. We have not attempted to examine them exhaustively, but we are satisfied that they justify a full examination and we would like to see them investigated jointly by the Royal College and the Pharmaceutical Society. The field for investigation might be defined as “ the function of the nurse in the handling and administration of medicines and the best methods of training, hospital organisation and the circulation of information to enable her to perform it ”.

THE TRAINING OF THE STUDENT-NURSE

45. The spate of new remedies and new techniques in medicine makes it desirable in teaching medical, nursing and pharmaceutical students to concentrate on general principles rather than specific examples. Unfortunately,

there is not time in the nursing curriculum to study the basic sciences fundamentally and in consequence the training of the student-nurse in the handling of medicines must be a compromise. The limited time available compels the teacher to concentrate on the practical rather than the theoretical aspects of the subject. Emphasis should therefore be placed on the recognition of medicaments, their use and action, and on the techniques of administration, with warnings of the dangers of extemporaneous compounding. This field is not pharmacy nor pharmacology, but something of its own appropriate to the special needs of nurses. For this reason, we doubt if the training can best be given either by a pharmacist or a pharmacologist, each of whom might be expected to emphasise the theories and techniques of his own science. We consider that a sister-tutor can best extract the necessary essential material, strike a working compromise between fundamental principles and daily examples and illustrate her presentation from practical nursing experience. She will certainly benefit from discussions with the pharmacist and others in the preparation of her lectures and demonstrations and the fullest help should be available to her from the pharmaceutical department. Those who are responsible for arranging training courses for sister-tutors might usefully study the desirability of including in them lecture-demonstrations by a pharmacist.

MATTERS OF ORGANISATION

46. There will be a number of matters in the internal running of a hospital where consultation between the matron and the pharmacist can improve the organisation or help the nursing staff. One field where both have responsibilities is the keeping of medicines issued from the pharmaceutical department, usually as ward stocks. The Poisons Rules 1952 (rule 29(4)) require these stocks where they include statutory poisons to be inspected by a pharmacist (or some other person appointed for the purpose by the governing body). We consider that when the pharmacist undertakes these duties he should also inspect all ward stocks of medicines. Obviously this duty would need to be performed in consultation with the matron and if need be the respective fields of responsibility defined. Broadly, it would be the responsibility of the nursing staff to maintain an adequate stock and to ensure safe custody and proper use. It would be for the pharmacist to see that the material was fit to be used, that unnecessary stock was cleared out and that proper labelling and storage conditions were observed. In small hospitals where there is no dispensary and where the stock of drugs is probably contained in a cupboard under the care of the matron, the pharmacist designated to take the responsibility for that hospital (as we describe in paragraph 18 above) would inspect the stock from time to time.

INFORMATION FOR THE NURSING STAFF

47. The Royal College of Nursing stressed in their evidence the great need for continuing information to be provided for nurses about new medicaments and their effects. The following is an extract from their Memorandum of Evidence:—

“On no subject are responsible ward sisters more unanimous and emphatic than on the need for information about possible effects of new drugs on their patients. New drugs and new anaesthetics are ordered or given in the theatre, and sisters are left in the dark as to what reactions to expect or how to deal with what may become a critical situation. The Royal College of Nursing could quote many instances of how patients would have been nursed more competently if only Sister had received

proper instructions. More frequent contact between the hospital medical and nursing staff on these matters is urgently needed. So often, though working to the same end, doctor and nurse tread different paths. Sisters complain that they are not encouraged to take the intelligent interest in their work which would enable them to give of their best".

This opinion they reinforce by examples. We agree with the College that closer liaison between the consultants and the nursing staff is the ideal way of remedying this defect, but we doubt whether it is possible to rely solely upon this. New remedies are always being tried, consultants move from one post to another, nursing staff come and go. Something more than the unorganised co-operation of the consultants is needed. A similar problem is familiar to pharmacists in their own field, where in an attempt to meet it loose-leaf cards containing up-to-date information about new proprietary medicines are being circulated. Accepting the gravity of the problem as it is stated by the Royal College, it may be necessary for some central authority to produce a similar series of ward notes on cards kept up-to-date for the information of ward sisters and ward staffs. The problem requires examination in detail by the Royal College of Nursing and the Pharmaceutical Society, with medical advice.

PHARMACEUTICAL SUPPLIES

48. There have been differences of opinion since the beginning of the National Health Service about the role of the pharmaceutical department of a hospital in the obtaining of pharmaceutical supplies. Circular HMC.(50)7 made some concessions to representations made to the Ministry by the Pharmaceutical Society and the Guild of Public Pharmacists but from evidence we have received this circular seems to have been interpreted in different senses and the question remains a source of friction in some Groups. Our own opinion as to the principle to be applied is clear and is reinforced by what we saw in the hospitals we visited. This principle is that the selection and storage of pharmaceutical supplies is one of the main functions of the chief pharmacist so that he may assure his governing body, medical staff and patients that the supply of medicaments corresponds with the prescriber's requirements. He can only discharge that responsibility if he has an effective voice in deciding what is to be purchased, in what quantities and sizes, and from what sources. In many cases it is a wasteful duplication of effort to try to train members of the staff of some other department to handle these materials when there is a pharmaceutical staff who are not only trained for the purpose but who have that as one of their principal functions. We do not suggest that all the stages of this process need be performed personally by a pharmacist. Many of them can be undertaken by experienced clerical staff working in the pharmaceutical department or for that matter elsewhere.

49. Pharmaceutical supplies comprise a very large number of items with variations in names, quality, strengths and dosage which provide traps for the laymen and it is easy to waste money by selecting wrong sizes, wrong packages or wrong sources of supply. Particularly in this field, price is not the final criterion. A knowledge of the firms in the pharmaceutical industry and their reputation for special items is more important. The pharmacist has a peculiar responsibility for the accuracy of the products which leave the pharmaceutical department. Errors may cause death. He cannot hand over this responsibility to anyone else and he cannot discharge it adequately unless he has personal control over the drugs he uses from the time when they are ordered to the time when they leave his hands in accordance with the prescriber's requirements.

Evidence of Visits

50. The best departments we saw were those where the purchasing or pharmaceutical supplies was in the hands of the chief pharmacist. It was also evident that in such hospitals it has contributed to building up in that department the feeling that its staff have full responsibility for the service they give, a contribution to morale not to be undervalued. In those hospitals where the ordering was the responsibility of another department—although it may have been acting in collaboration with the pharmaceutical department—we sometimes found a machine unnecessarily elaborate and costly, not responsive to the practical needs of the pharmaceutical department and frequently the subject of criticism from suppliers, whether or not in fact it was justified. In some hospitals a satisfactory collaboration had been achieved between the two departments whereby the more mechanical work, such as the typing out of lists, was performed in the supplies department.

Costing of Drugs Used

51. Through the courtesy of the Nuffield Provincial Hospitals Trust we have been provided with some preliminary findings from an enquiry which the Trust is undertaking to discover how far a system of Unit Costing can be applied to the pharmaceutical departments of hospitals. Further information may lead to small variations in the percentage figures we quote but is not expected to modify the conclusions significantly. The following is a summary of them.

(1) A normal general hospital holds in stock approximately 3,000 different pharmaceutical items.

(2) 80 to 90 per cent. of the total expenditure on drugs in any hospital is accounted for by approximately 30 items only, although individual items will vary between one hospital and another.

(3) We have prepared a short list of drugs common to all hospitals which should account for some 60 to 70 per cent. of the total drug bill of any general hospital. (Appendix 4).

52. The total cost of drugs and dressings used in the hospital service in England and Wales during the financial year 1951/52—the latest available figure—was £10,112,406. Assuming the cost of drugs included in this amount to be £6,500,000 quite a small number of drugs—certainly under 100—would account for £4,500,000 while the remaining £2,000,000 are spread over the whole of the remaining items. Furthermore some 40 per cent. to 50 per cent. of the total expenditure on drugs in any general hospital is accounted for by five items only. These are the five antibiotics available to hospitals, i.e. penicillin, streptomycin, chloramphenicol, aureomycin and terramycin. Of these five, all except penicillin are purchased by hospitals direct from the manufacturers under the Ministry's central contracts. We deal later with the application of these findings to the securing of economies within hospitals. Here we are concerned with their application to the obtaining of supplies. They suggest the following conclusions:—

(1) In so far as contracting for pharmaceutical products is to be undertaken by the Ministry, then the number of items for which it would be worth while would probably not exceed 100, based upon the 30 drugs mentioned above in paragraph 51(2).

(2) Centralised buying involving storage by the Ministry (as distinct from the central negotiation of contracts) is probably never worth while.

(3) Bulk procurement by groups may be desirable for not more than about 150 items altogether, from which must be deducted those for which the Ministry contracts.

(4) It is unnecessary and uneconomical formally to invite tenders for the remaining 3,000 items. They can be most economically bought by calling for competitive quotations as and when they are required by the pharmacist.

53. The Association of British Pharmaceutical Industry drew our attention to the unnecessarily complicated machinery for obtaining pharmaceutical supplies that exists in some hospitals. They drew our attention to conditions of contract which they said had been recommended as the basis for the purchase of pharmaceutical supplies, but we are glad to observe that the Minister has declined to approve the standard conditions or to advise that they be adopted generally. They told us that manufacturing firms are regularly requested by hospitals not to stand upon the terms of such contracts after they have been made, where a variation is for the benefit of the hospital, and that they invariably comply. We believe that the bulk of business is still done on a simple warranty that the goods supplied comply with the standards of certain works of reference or Statutory Instruments. Where the real basis of the transaction is goodwill between buyer and seller, such contracts have no real significance and could be abandoned with no detriment to the hospitals in favour of the warranty system traditional in the trade.

54. We observe in Circular RHB(52)13, HMC(53)12 of 20th February, 1953, that it is proposed to extend the existing schemes of central contract and purchasing of drugs "possibly on a pilot basis in one Regional Hospital Board area". We would advise that before any such extension is put in hand a full investigation should be made among the principal hospitals in that Region to ascertain for each one particulars of the drugs responsible for the major part of the drug bill and that any extension of central contracting should not extend beyond those drugs common to the majority of the lists so produced.

Surgical Dressings

55. At our request the Surgical Dressings Manufacturers Association prepared a memorandum on the purchase of surgical dressings for hospitals. The following points in their memorandum seem to us to be significant:—

(a) During the war the selling prices of the Association were controlled, but in 1949 when governmental control ceased the industry decided to continue agreeing its prices on the same basis as hitherto. At the end of 1951, when the industry first began to feel the effects of the trade recession, it was felt that some stability in the trade should be maintained through the continuation of an organised price structure. At the end of 1952 the industry adopted a system of price fixing based on the most efficient producers, rather than the averages, so that "the trade have agreed that these minimum prices must apply to all sections of trade concerning government services".

(b) The Association feel that there are very great advantages to be gained by leaving the buying of surgical dressings in the hand of the smallest possible unit. Manufacturers would prefer to see surgical dressings purchased by individual hospitals but, failing this, it sees no serious disadvantage in the present system whereby supplies are purchased at the

Hospital Management Committee level. From the point of view of the industry the smaller the buying unit, within reason, the better is the spread of the trade over the full number of concerns.

(c) It is felt that sufficient standardisation of supplies already exists in that two official qualities of nearly all dressings are already supplied under strict specifications. One of these is the standard laid down by the British Pharmaceutical Codex and the other is the Hospital Quality which has been agreed by the industry for many years and which is accepted throughout the country. Besides these two qualities there are intermediate and superior grades available where they are required. The Association feel that over-standardisation would tend to lead to a stifling of initiative and that manufacturers must be prepared to meet the special requirements of surgeons and nurses whenever necessary.

The Medical and Surgical Plaster Makers' Conference in a written memorandum made the same point as that mentioned at (b) above.

56. Because dressings consist basically of something to be applied to wounds and something to hold that which is applied in place, and in almost every case both these articles are thrown away immediately they are removed from the patient, we cannot but feel that simplicity is in every respect most desirable. We believe that in general the existing two qualities, that laid down by the British Pharmaceutical Codex, and the cheaper variety, the "Hospital Quality", are quite sufficient. The former should normally be used where the dressing comes into contact with the wound. Otherwise the "Hospital Quality" is adequate. Surgical dressings should, in our view, be reduced to the smallest number of varieties required and should be supplied on that scale which is the most economical. There is in this field, no merit in encouraging individual groups to experiment with a diversity of commercial varieties. From their nature it appears to us that dressings are items which could well be supplied through central contracts; there is, of course, no need for central storage.

57. We do not feel disposed to comment further on these matters because in our view the issues involved, although important, are not directly within our terms of reference.

CONCLUSIONS—III: PHARMACEUTICAL SUPPLIES

58. Our conclusions on this part of our enquiry are as follows:—

(1) Responsibility for pharmaceutical supplies is a normal and important function of the pharmaceutical department: by responsibility is meant choice of and decision upon materials and sources of supply.

(2) Only a strictly limited number of drugs are used in sufficient amount, or involved sufficiently great expenditure to make it economical to buy them nationally; where this is done, contracts should be negotiated, but the goods should not be taken into store for redistribution.

(3) Apart from these, a small number of additional drugs may be usefully bought by groups by means of competitive tenders.

(4) The great majority of the items used in the pharmaceutical department should be bought at current prices or by competitive quotation as required from suppliers selected by the pharmacist. For these no elaborate form for contracting or ordering is necessary. The custom of trade, which is to rely on warranty and on good relations between buyer and seller, is sufficient.

(5) In every group consultations should take place between the pharmacists with a view to pooling orders wherever it is advantageous to do so.

(6) Neighbouring groups may find similar consultations useful.

(7) So long as the selection of the material and the source of supply and the control of receipt and storage is in the hands of the pharmacist and he is free to place his orders without delay, there may be advantages in using the services of the supplies department for other stages of the purchasing process. It will aid the smooth working of joint arrangements if it is understood that the method of resolving any difference of opinion between the two departments is for both the pharmacist and the supplies officer presenting their views to any committees concerned and eventually if need be to the governing body.

ECONOMY IN THE PRESCRIBING OF DRUGS

59. In a number of hospitals which we visited, we were told of substantial economies secured without prejudice to treatment, by an investigation by the Medical Committee of current prescribing practice. Where this has not been done, it might now be put in hand, with periodical reviews subsequently. The Medical Committee might consider how far general authority can be given to the pharmaceutical department for the list of equivalents of proprietary preparations in the National Formulary to be applied to the dispensing of prescriptions written in the hospital. We have had our attention drawn however to the impropriety of establishing a wide-spread and casual system of substitution of one medicament for another, and we agree that it is very important that prescribers should be in no doubt about the drugs which are being supplied on their orders. The list of preparations in the National Formulary is divided into two parts. The first part consists of chemical and biological substances for which standards of purity and/or potency are laid down in official works of reference, but which are available under various trade names. In our opinion it is most undesirable that the pharmaceutical department should be required to stock several brands of the same chemical substance, especially when all of them must conform to official standards. We therefore suggest that Medical Committees should be invited to give general authority to the pharmaceutical department to dispense the official equivalent of any proprietary preparations included in List A in the National Formulary, and that the Chief Pharmacist should be required to submit for consideration other substances of a similar nature at his discretion. The principal criterion for the inclusion of a particular substance should be that it is subject to specific requirements as to purity and/or potency. The second part of the list comprises substances which are not identical but which are reputed to have an analogous therapeutic effect. Therapeutic effect, unlike chemical constitution, is a matter upon which various opinions may exist and the pharmacist is not competent to offer more than advice on this question. Medical Committees might consider List B to see how far unanimity can be obtained with regard to individual items and that the pharmaceutical department should then be supplied with a list of standard preparations which are generally acceptable to the medical staff in place of the equivalent proprietary preparations. It is important that this list should be circulated to all junior medical staff who are not members of the Committee, in order that there is no doubt about the exact preparation being supplied on a particular prescription. We realise that these suggestions are only of a stop-gap nature, and that the real solution to the problem is that prescribers should use the official rather than the proprietary names when writing prescriptions unless they wish to refer to a particular manufacturer's

product. We note that in a number of medical schools emphasis is being laid on this point and we feel that pharmacists can give a great measure of help by consistently using the official names on labels. Finally, we would again emphasise the dangers of indiscriminate substitution. In all cases where our suggestions are put into effect, the pharmaceutical department should be left in no doubt about the extent and limits of its powers. Prescribers should also be fully aware of what has been done so that they are left in no doubt about the medicine which will be supplied upon a particular prescription.

60. It will be found that the fullest possible analysis of the prescribing, amounts and costs of antibiotics in particular will produce valuable results. Prescribers may be surprised when they learn the cost and with no detriment to the patient economies may be effected even without the limitation which we found had been imposed in one Group of reserving the prescribing of these drugs to the senior medical staff. It has also been found that economies can be effected by analysing the costs of drugs and dressings by wards. Such an enquiry would require collaboration between the matron and the chief pharmacist, particularly in the analysis of the results: each ward has of course its own requirements, which may not be comparable with those of another ward. We illustrate our Report with a picture used in Bristol to bring home the virtues of economy in this field.

61. We recommend that in each Group a committee should be formed to study this question. It should consist mainly of medical and pharmaceutical members. Its terms of reference might be:—

“To review the conditions under which drugs and dressings are prescribed with the Group, having particular regard to:—

(a) the prescribing of those items responsible for the largest proportion of the cost to the hospital of drugs and dressings ;

(b) the utilisation to the maximum extent of the National Formulary ;
and

(c) limitations upon the prescribing of antibiotics.”

62. The following recommendations selected from others in the report of a special committee appointed by the Sheffield Regional Hospital Board are deserving of consideration by groups elsewhere:—

“(1) When hospital pharmacists receive prescriptions for proprietary articles they be authorised to substitute equivalent preparations based on the National Formulary unless the prescription is countersigned by the appropriate Consultant to indicate that the proprietary brand must be supplied.

(2) Medical staff contemplating the use of drugs not normally stocked by the hospital dispensary, or stocked in small quantities only, should indicate to the pharmacist the approximate quantities they are likely to require over a specified period so that excessive ordering and consequent waste may be avoided.

(3) The routine administration of drugs, and particularly of vitamin tablets, to in-patients should be reviewed at regular intervals.

(4) Hospital Management Committees should prepare a leaflet for issue to resident medical staff upon appointment emphasising the need for economy in prescribing, the use of equivalent non-proprietary preparations and describing the practice prevailing at the hospitals within that group.”

63. We think it desirable to add a final word of caution. The drive for savings in the pharmaceutical field must not be pressed to extremes. In the attempt to reduce the growing cost of the pharmaceutical service there is a danger of sacrificing quality to cheapness, for price is by no means the final criterion by which drugs and medicines are to be judged. It is also possible to achieve short-term savings at the cost of long-term damage to medical research and progress. It is essential to avoid creating an impression, however false, that economy looms too largely in the treatment of patients in the Health Service.

64. For convenience we summarise proposals for economy in prescribing which should be examined by the Committee proposed in paragraph 61 above:—

(1) authorising the use of equivalents in place of proprietary medicines in appropriate cases.

(2) limiting the routine administration of antibiotics and vitamins;

(3) analysing the cost of prescribing by departments or individuals;

(4) examining the prescribing and use of each of the 30 or so items responsible in that Group for the greater part of the cost of drugs;

(5) devising means whereby excessive prescribing or possible economies can be kept under regular review and brought to the attention of the Medical Committee;

(6) utilising to the maximum extent the National Formulary;

(7) instituting a system whereby prescribers will warn the pharmacist of the probable duration of the prescribing of an unusual medicament to avoid overstocking and whereby the pharmacist may advise the Medical Committee of excessive stocks held;

(8) the preparation of a leaflet for medical staff on economy in prescribing.

65. We have had our attention drawn to a divergence of practice in the treatment of out-patients referred to consultants by general practitioners. In some hospitals the practice is to retain them as out-patients, in others they are returned to the care of their general practitioner after their condition has been diagnosed, with appropriate recommendations for their treatment. In the first case, the cost of their medicine is borne by the hospital, in the latter it falls on the Executive Council, less in both cases what is paid by the patient. The second alternative should not be preferred solely on the ground that it lightens the financial burden of the hospital: it is to be recommended because it retains the basic relationship between the patient and his personal doctor. We quote on this subject with approval the following opinion from *Background to Hospital Planning* by Professor H. W. C. Vines (lately Dean of Charing Cross Hospital Medical School):—

“The Pharmacy in large hospitals is, by custom, usually sited in close relationship to the out-patient services, a site which was necessary in the days when treatment was a major feature of the clinics and the provision of medicines an important function of the hospital. But now the emphasis is shifting from treatment more towards investigation and diagnosis as the first aim of the out-patient service: the service should be essentially *consultative*, with the treatment carried out at home by the local practitioner. What so frequently happens is this: a patient is seen by his home doctor and he wants a consultant opinion, so he refers the patient to the hospital with a letter about the case: the consultant sees the patient at his out-patient clinic, investigates him and after arriving at a conclusion sends him

back to his doctor with a written opinion, usually also suggesting a suitable treatment which the doctor proceeds to carry out: in the average sort of case the patient can get the necessary medicines from his local chemist and he may be saved a number of time-wasting journeys to the hospital just to get another bottle of medicine ”.

RESEARCH

66. We found on our visits to hospitals that the facilities for original investigations and the encouragement given to pharmacists to undertake them varied greatly. In teaching hospitals pharmacists are often encouraged to undertake in co-operation with the medical staff the investigation of many problems and are given the facilities to do so. In other hospitals their contact with the medical staff is sometimes remote and as a result they are able to undertake little or no original work. We have no doubt that the pharmacist should be encouraged to undertake investigation and enquiries into matters which are of profit and interest to the hospital in which he works and the hospital service generally. We recognise that large scale research will usually be beyond the resources of the pharmaceutical staff of busy hospitals and the time available, yet problems of interest and importance present themselves regularly in the course of the daily routine and many would certainly repay investigation. We believe that governing bodies should give the necessary encouragement to their staff to do so and should provide facilities by way of time and equipment so far as the resources of the hospital permit.

67. The Minister has power to arrange for refresher courses for the staff in the Health Service generally. Hitherto no such courses have been provided for pharmacists and at the present time, because of shortage of staff, it might be difficult to do so. Chief pharmacists of hospitals should be encouraged to consider whether they could offer to pharmacists outside the hospital service to provide short courses of a practical nature dealing with recent developments. These would be of immediate benefit to the Service because they would give pharmacists in retail practice an insight into the work done in hospitals and might encourage a useful co-operation between the two branches of the Service. Governing bodies should facilitate the attendance of pharmacists at meetings such as those of the British Pharmaceutical Conference and of the International Pharmaceutical Federation by grants and by leave with pay.

PHARMACEUTICAL STORES RECORDS

68. We noticed considerable variation in the records kept in different pharmaceutical departments. We suggest below the simple records which would suffice for most types of hospital. Anything more elaborate is likely not to justify the cost of operating it. These suggestions are based upon a note prepared for us by Miss D. M. Livock lately of the Nuffield Provincial Hospitals Trust to whom we are much indebted for putting her extensive knowledge of the organisation of hospitals at our service.

The system of records should provide information:—

(1) To ensure that the goods paid for may be checked against the goods received ; for efficient buying this would include:—

- (a) the individual prices of drugs,
- (b) the quantities used and the rate of turnover,
- (c) the minimum stock level: that is the level at which further supplies should be ordered ;

2. to minimise losses through theft or wastage ; but the cost of stock control should not exceed the value of the losses.

In a small hospital records of buying are all that will be required and they may be in the form of a simple card index. The annual stock taking should be limited to unopened containers. The larger hospitals will need stores records, but no financial valuation of drugs except for stock taking purposes. When the store is serving more than one pharmaceutical department, as in a Group organisation, the pricing of issues will be necessary so that expenditure on individual hospitals can be assessed.

ACCOMMODATION

69. During our visits we were particularly struck by the variation in standard of accommodation provided for pharmaceutical departments. This variation applied equally to mental and general hospitals. In some the accommodation is well planned, spacious and modern with adequate store-keeping facilities, in others it is cramped and badly situated. Improvements in the accommodation at any existing hospital must be dependent upon the present building, the site and the resources available. Substantial development may be impossible. On the other hand, where new accommodation, including pharmacy, is being planned, it is essential that the needs of the department should be made fully known to the architect from the beginning and that the pharmacist shall be brought into consultation with him. Many departments which we visited were too small or too scattered because it had been no one's business to study the planning of the accommodation in relation to its functioning. Examples of needs which are too often overlooked are the following:— the pharmaceutical department must be sited where it may best serve both the wards and the out-patients ; there must be a departmental office for clerical work ; control of stores is impossible unless there is ample room for storage ; empties can only be quickly and economically dealt with if space is set aside for them ; there must be easy access to the outside of the hospital to enable goods coming in and empties going out to be easily handled ; proper provision must be made for bottle-washing. These are some of the important requirements to be borne in mind when preparing the plans. They are, of course, supplementary to the more obvious needs, such as a room for the staff, proper laboratory facilities for investigations and adequate provision for the preparation of sterile medicaments. It is most undesirable that the pharmacy department should be used to store items of equipment which are not dealt with or handled by the pharmacist. In some hospitals the pharmacy has clearly become the dumping ground for items of valuable equipment which could not conveniently or quickly be housed elsewhere. We would add here a special plea for the discontinuance of the name "Dispensary" as the description of a pharmaceutical department. "Dispenser" as a description of the pharmacist has almost died out, but "Dispensary" remains as a reminder of Victorian days when the whole of the pharmaceutical work of a hospital was concentrated in one room. To-day "Dispensary" remains a valid description for the room in which the dispensing is done, but the group of rooms of which the dispensary is one can be appropriately called by some such name as "Pharmaceutical Department".

THE MANUFACTURE OF PHARMACEUTICAL PREPARATIONS

70. Some hospitals manufacture a wide range of pharmaceutical preparations. Others buy as much as they can ready-made. It is not easy to offer precise advice because circumstances vary between Group and Group and

between individual hospitals. The quality of standard pharmaceutical preparations bought from a manufacturer of repute is such as to make it unnecessary to-day to contemplate making them in a hospital unless a full estimate of the cost of doing so shows an obvious economy. This is particularly so where the final product requires to be checked analytically, as in the case of some tinctures and extracts. There may be exceptions to the above rule where specially large quantities are used, as for example ointments in a skin hospital, or where machinery is required for some special purpose and it is economical to keep it running full-time. This may be justified more readily when it enables staff to be kept at skilled work.

71. The extent to which manufacturing should be undertaken must be determined in relation to the needs and resources of a Group as a whole rather than of individual hospitals. What may be uneconomical in a number of small units may be justified when centralised or the reverse may be true and manufacturing processes may be parcelled out among the units. It is important that before expensive new apparatus is purchased the extent to which it will be used should be carefully estimated. Neighbouring Groups may arrange to share a machine which no one Group would be justified in installing for its sole use.

72. Very large quantities of perfusion fluids are used to-day in general hospitals. They are expensive and bulky and when bought ready-made a substantial part of the cost is represented by the cartage of water. As a rough guide it may be said that where a Group is spending over £1,500 annually on perfusion fluids, it will probably be worth while to make them. A special room will be needed with a pharmacist full or part-time, a technician and cleaning assistance. Capital equipment will include a still, autoclaves, bottles and racks, the cost of which should be recovered easily in the first two years. We have had figures of costs of production compared with the commercial price from certain hospitals and we are satisfied that there are very large savings to be made. Every Group should most carefully examine their requirements in this field and the means whereby they can be produced within their own hospitals or by arrangement with a neighbouring Group.

INTERNAL ADMINISTRATION

73. During the course of our visits to hospitals we noticed particularly the varying degrees of organisation which existed within the pharmaceutical department and observed that the efficient working of the department depended to a remarkable extent upon the way in which the pharmacist or chief pharmacist, had been able to delegate work which did not require his professional skill, to clerical and other non-professional assistants and to make use of simple mechanical devices to save manual labour on routine operations.

74. It is clear that the shortage of pharmacists makes it imperative that in every department steps should be taken to ensure the pharmacist is not engaged upon work which can be effectively undertaken by others less highly trained. On the other hand, if the non-pharmaceutical assistance is to be effective, the individuals employed in the department must be able to understand the work required of them. This applies especially to clerical staff, who will have to become familiar with a somewhat complicated terminology and to appreciate the need for extreme accuracy of work. It is to be desired therefore that the pharmacist should have some voice in the choice of such staff and that once posted to the pharmaceutical department they should be allowed to continue there undisturbed.

75. There are numbers of processes which can be carried out quickly and cheaply by the use of simple machines. The saving in time and labour when such devices are available is obvious. It is important therefore that hospital authorities should realise how good a return is to be obtained from the capital invested in this way.

76. Perhaps the most important point of all is that the pharmacist himself should, from time to time, examine the running of his department and satisfy himself that it is so ordered that each of the many activities are being undertaken by the individuals and in the places where they can be most economically and effectively performed. This applies particularly to the arrangements for the office work inevitable in any department. The pharmacist must appreciate this for what it is and ensure that it can properly and readily be done.

RECOMMENDATIONS

1. The purchase, storage and issue of surgical instruments and equipment, surgical appliances, X-ray and physiotherapy equipment, etc., should not be part of the work of the pharmaceutical department. Where no practical alternative can be found, the pharmacist should be given suitable assistance. (Para. 7.)

2. Developments in the pharmaceutical service should be planned in accordance with the following principles :—

(1) that pharmacy is a science and art of its own ; (Para. 8)

(2) that effective advice and decisions upon pharmaceutical matters need to be in the hands of pharmacists ; (Para. 8)

(3) that the pharmaceutical service should be progressively unified upon the basis of the group as a unit. (Paras. 14 and 18-20).

3. Fuller use should be made by governing bodies of the services of the pharmaceutical section of the Ministry of Health. (Para. 9.)

4. Governing bodies should ensure that the Group chief pharmacist and the chief pharmacists of hospitals have unimpeded access through the normal channels to their governing bodies. It is the responsibility of the latter to ensure this. (Paras. 11 and 17.)

5. Governing bodies should arrange consultative machinery appropriate to the circumstances of the Group to enable the chief pharmacists to meet and discuss their pharmaceutical problems and the pooling of resources. (Paras. 11, 12, 18 and 20.)

6. Regional Hospital Boards should appoint Pharmaceutical Advisory Committees to keep the pharmaceutical services under review and to advise upon developments that will promote economy and efficiency and upon any questions that may be referred to them. In particular they should arrange for a survey to be undertaken as soon as possible along the lines indicated in paragraph 13. The members of the committee should be mainly pharmacists but should include one or more medical men, a person experienced in hospital administration and members of Management Committees or Boards of Governors. Special arrangements will probably be necessary for London. (Paras. 12 and 13.)

7. Whenever a pharmaceutical department is planned or replanned, the pharmacist should be brought into consultation with the architect from the beginning. (Para. 17.)

8. Governing bodies should assign to every hospital a pharmacist (normally a pharmacist working in the Group) who will have the responsibility for its pharmaceutical needs, staff and service, however small. He will be recognised as "The Pharmacist" to that hospital. (Para. 18.)
9. When circumstances permit, the pharmaceutical service of a Group should be unified under one administrative head, the Group Chief Pharmacist. Appropriate terms of service for this grade should be negotiated. (Para. 20.)
10. Where there is no Group chief pharmacist, the chief pharmacists should be invited to choose one of their number to represent them when necessary at meetings of the governing body. (Para. 20.)
11. Wherever possible chief pharmacists of hospitals should establish contacts with schools of pharmacy to encourage recruitment into the hospital service and to offer facilities to students to familiarise themselves with the special techniques of hospital pharmacy. (Para. 27 (iii).)
12. The classification of hospitals for the determination of the salaries of pharmacists should be re-examined in order to find a basis that will take account of the quality as well as the quantity of their work. (Para. 28.)
13. The Minister and the Secretary of State for Scotland should be invited to call a conference which should include representatives of the Pharmaceutical Society, the Society of Apothecaries, the Guild of Public Pharmacists and the Service Departments to consider the steps to be taken to regularise the position of assistants undertaking dispensing duties in hospitals. (Para. 41.)
14. The Pharmaceutical Society and the Royal College of Nursing should be invited to consider the formation of a joint committee to consider matters of common interest to the two professions within the hospital field in particular, ways and means of giving nursing staff regular information about the action and uses of new therapeutic agents. (Para. 44.)
15. Arrangements for the obtaining of pharmaceutical supplies by hospitals should be based on two principles:—
 - (1) That the selection of pharmaceutical supplies is one of the main functions of the hospital pharmacist, who must take the responsibility for deciding what is to be purchased, in what quantities and sizes and from what sources, and how to store it when received. (Para. 48.)
 - (2) Where some department other than the pharmaceutical department performs any of the stages in the purchasing process, the pharmacist's responsibility must in no way be impaired. (Paras. 49 and 50.)
16. The training of student nurses in the handling of medicines is best given by a sister-tutor with such help as she may request from the pharmaceutical department. (Para. 45.)
17. Drugs and dressings for which there are standards in accepted works of reference or Statutory Instruments should be purchased competitively on a simple warranty that they comply with those standards. (Para. 52.)
18. Before the extension of central contracting for drugs on a pilot basis in one region is attempted, as suggested in Circular RHB (53) 13, the hospitals of that region should be required to prepare lists of the most costly items in their drug expenditure and central contracting should in general be limited to the items common to these lists. (Para. 54.)

19. Regional Hospital Boards should encourage neighbouring Groups in urban areas to develop joint arrangements for procuring pharmaceutical supplies and pooling manufacturing activities. (Para. 58.)

20. In each Group a committee should be formed to study methods of securing economy in the prescribing of drugs. (Para. 61.)

21. Hospitals should be advised against the practice of bringing out-patients back to the hospital solely for medicine or dressings. Such patients should be referred to their general practitioner after their condition has been diagnosed and the treatment determined. (Para. 65.)

22. Governing bodies should provide accommodation and other facilities appropriate to the hospital to encourage original investigations by their pharmacists. They should also encourage their attendance at appropriate conferences. (Paras. 66 and 67.)

23. Hospital pharmacists should be encouraged to offer short courses to pharmacists outside the hospital service. (Para. 67.)

24. The manufacture of standard galenicals should not be generally encouraged in hospitals. The manufacture of perfusion fluids should however be substantially developed on a Group or wider basis. (Paras. 70-72.)

25. Sufficient and suitable help—both in staff and machines—should be made available to enable the pharmacist to devote his time and skill to that part of the work which he alone can do. In particular clerical help should be provided ; the staff allocated to the department being regarded as specialist and not available for common use in the hospital. (Paras. 73-76.)

HUGH LINSTEAD
JANET K. AITKEN
JOAN ALLEN
ALBERT F. BRADBEER
J. B. HOUGH
JOHN B. LLOYD
STEPHEN MERIVALE
WILFRED TRILLWOOD
JOHN H. WOOD

TOM NICOLE,
Secretary.

APPENDIX 1

Organisations and Persons from whom evidence was received

Written and oral evidence:

Association of British Pharmaceutical Industry
Association of Scientific Workers
Confederation of Health Service Employees
Guild of Public Pharmacists
Institute of Hospital Administrators
Pharmaceutical Society of Great Britain
Royal College of Nursing
Royal College of Obstetricians and Gynaecologists
Royal College of Physicians
Royal College of Surgeons
Worshipful Society of Apothecaries

Written evidence:

The Surgical Dressings Manufacturers' Association
The Medical and Surgical Plaster Makers' Conference
Tyne, Wear and Tees Branch, Guild of Public Pharmacists
West Midlands Dispensers' Association

Birmingham and Midlands Hospitals Pharmacy Committee
Miss K. A. Foxall, Chief Pharmacist, Princess Alice Memorial Hospital, Eastbourne Hospital Management Committee
C. H. Preston Robinson, Group Pharmaceutical Officer, Mansfield Hospital Management Committee
North West Metropolitan Region Hospital Pharmacists' Association
D. Dickinson, Group Pharmacist, Salisbury Hospital Management Committee
W. C. King, Senior Pharmacist, Brook Hospital, Woolwich Hospital Management Committee
G. F. Turner, Chief Pharmacist, Southlands Hospital, Worthing Hospital Management Committee

APPENDIX 2

Hospitals Visited

Birmingham

Children's Hospital
General Hospital
Queen Elizabeth Hospital

Bristol

Barrow Gurney Mental Hospital
Bristol Mental Hospital, Fishponds
General Hospital
Royal Infirmary

Cardiff

Llandough Hospital
Royal Infirmary

Leicester

Royal Infirmary

Liverpool

David Lewis Northern Hospital
Rainhill Mental Hospital
Royal Infirmary

London

Harefield Sanatorium, Middlesex
St. John's Hospital for Diseases of the Skin, W.C.2
St. Thomas' Hospital, S.E.1
Whittington Hospital, Highgate

Manchester

United Manchester Hospitals

Nottingham

City Hospital
Women's Hospital

Salford

Hope Hospital
Ladywell Hospital

Southampton

Royal South Hants. Hospital
Southampton General Hospital

Winchester

Royal Hampshire County Hospital

APPENDIX 3

Report from the Board of Studies in Pharmacy of the University of London to the Board of the Faculty of Medicine on the Teaching of Pharmacy in the Medical Curriculum

In view of the reorganisation of the teaching of medical subjects outlined in the Goodenough Report, the Board of Studies in Pharmacy thought it advisable to review that portion of the medical curriculum which involves the teaching of pharmacy. Their conclusions are incorporated in the following report which it is hoped that the Board of Faculty of Medicine will welcome.

It is desirable to consider the following points in connection with the problem:—

1. The standard, scope and time devoted to Pharmacy.
2. The correlation of it with pharmacology, therapeutics and medicine.
3. The status and remuneration of the teacher.

With regard to the scope of the subject it is suggested that the medical student should not be greatly concerned with how drugs are compounded, or how prescriptions are dispensed, for that is the concern of the pharmacist. The subject should be taught from a prescriber's point of view, and such teaching should be correlated with that of pharmacology, therapeutics and medicine, thus forming part of a general scheme.

It is suggested that medical students should have knowledge of the following:—

1. The drugs and preparations which are available for treatment.
2. The various methods of formulating drugs for specific medical purposes.
3. Incompatibility of drugs in relation to prescribing and treatment.
4. The correct writing of a prescription and the control of unusual doses. Weights and measures.
5. The economics of prescribing. Costs and alternative preparations.
6. The aseptic handling of sterile preparations.
7. The instability of certain drugs and their preparations such as Penicillin, Neoarsphenamine, etc., and its influence on prescribing.
8. The availability and properties of various antiseptics and disinfectants.
9. The Laws and Regulations affecting pharmacy in medical practice.
10. The extent and authority of the B.P., B.P.C., and N. (W). F.*

Scheme of Teaching

The Board suggests the following scheme of teaching which does not involve an increase in time but a redistribution of the time at present allocated to the subject.

The Course to be divided into two parts, an *Introductory* and a *Final Course*.

The Introductory Course

This course should be given immediately after the 2nd M.B. Course when the student has some knowledge of pharmacology, physiology and biochemistry. It should form part of the introductory course in medicine. It should be appreciated that the student's knowledge of pharmacology at this stage is limited to the action of relatively few drugs. He is not yet acquainted with the wider range of drugs and their preparations, with the systems of Weights and Measures nor with the writing and understanding of prescriptions.

* Now superseded by the National Formulary.

It is suggested that this course should consist of about 6 × 1 hour lectures each followed by 1 hour of practical work or instruction and that they should cover:—

Theory

The extent, authority and use of the B.P., B.P.C., Extra Pharmacopoeia, N. (W). F., and the Pharmacopoeia of his own hospital.

Weights and Measures.

The methods of writing prescriptions for mixtures, lotions, ointments, etc.

The nomenclature and language of prescribing.

Posology, including the factors influencing it.

A general consideration of the preparations of the B.P.

Practical

The practical work should be concerned with the preparation of typical products, such as mixtures, powders, ointments, lotions, etc. Pills should not be made and the advisability of prescribing tablets should be stressed.

Final Course

This should be dovetailed into and correlated with the final course in therapeutics and medicine.

It is suggested that eight lectures should be given and the course should keep pace with the other subjects.

No practical work is considered necessary, but demonstrations of type preparations should be given.

The course should include the following information which is essential for good prescribing and which is not normally given to the student in any other part of his course.

The D.D.A. and Pharmacy Acts as applied to medicines.

A detailed discussion from a prescriber's point of view of all important drugs, groups of drugs and their preparations.

Parenteral Injections. Pyrogens.

Ointment Bases and the theory underlying their action and use.

Flavouring agents, preservatives and stabilisers.

The instability of certain drugs, such as Penicillin and Neoarsphenamine.

The principles of incompatibility.

Vaccine and sera with particular reference to storage and dosage.

Disinfectants and antiseptics, their types, availability, varied use and efficiency.

The economics of prescribing, cost and alternative preparations.

The Status of the Head of the Pharmacy Department

The Head of the Pharmacy Department should be responsible for administration, teaching and research. It is essential that he should have:—

(a) Experience in hospital pharmacy and a knowledge of pharmacology.

(b) Experience in lecturing.

(c) Ability to conduct research in his subject and to collaborate in research with other departments in the hospital. He should have a status approximating to that of a Lecturer.

The Cost of Drugs

Expressed as a percentage of total expenditure

	Teaching Hospital Group	Provincial General Hospital	Teaching Hospital	Provincial Group of Hospitals	Teaching Hospital	Provincial Group of Hospitals	Provincial General Hospital	Average
Penicillin ..	25.53	18.26	19.86	18.84	28.02	17.33	26.04	22.48
Streptomycin ..	13.21	16.55	3.96	12.95	10.31	7.72	2.43	10.16
Chloramphenicol ..	5.34	2.97	7.28	6.75	10.09	9.99	14.52	7.62
Aureomycin ..	—	—	2.97	1.25	—	1.02	1.18	1.73
Germicides ..	2.10	3.11	2.69	3.93	0.73	4.33	2.95	2.66
Methylated Spirit ..	1.28	2.16	2.97	1.95	—	1.60	1.78	1.82
Aminosalicylates ..	2.85	2.60	0.47	3.49	0.54	5.77	3.01	2.47
Liver and vitamin B.12 ..	0.28	2.56	0.69	0.27	—	0.08*	0.12	0.66
Insulin ..	0.75	2.30	1.50	0.76	0.88	5.01	1.64	1.92
Anti-coagulants ..	1.74	2.27	1.20	1.59	1.36	1.98	1.60	1.77
Water for Injections and Intravenous Solns. ..	—	2.13	2.33	2.74	—	—	1.25	2.11
Tetanus Antitoxin ..	0.59	1.79	1.32	1.07	1.31	1.15	0.63	1.10
Gallamine ..	1.32	0.61	—	0.54	1.17	0.12	0.66	0.74
Sulphadimidine ..	1.30	0.68	0.19	0.30	1.90	0.85	—	0.90
Thiopentone ..	1.22	0.81	1.07	1.63	0.48	1.32	1.67	1.13
Ergometrine ..	0.80	1.19	0.22	0.84	—	0.72	1.40	1.15
Diodone ..	1.17	—	0.76	0.87	2.85	0.92	—	1.21
Ascorbic Acid ..	1.04	1.08	0.74	1.74	1.25	0.81	—	1.31
Compound Codeine Tabs. ..	0.30	0.57	0.94	0.73	0.78	0.30	0.75	0.66
Solvent Ether ..	0.30	0.70	0.90	0.78	1.11	0.64	0.87	0.73
Antihistamines ..	0.77	0.36	0.90	0.62	—	0.51	1.55	0.71
Dextrose ..	0.52	0.89	0.32	0.31	0.68	0.61	0.37	0.53
Tubocurarine ..	0.84	0.19	0.58	0.27	0.64	0.52	0.75	0.54
Pethidine ..	0.43	0.83	0.30	0.25	—	0.22	0.58	0.50
Multiple Vitamin Capsules ..	0.76	0.61	0.76	0.68	0.86	0.52	—	0.70
Cocaine ..	0.76	0.26	0.37	0.65	—	0.51	0.16	0.42
Testosterone and Methyltestosterone ..	1.04	0.89	1.26	1.46	—	1.12	0.22	0.42
Ether Anaesthetic ..	0.51	0.50	0.73	0.47	—	0.48	0.55	1.05
Vit. B. Complex ..	0.53	0.17	0.24	1.23	1.34†	0.51	0.19	0.53
Glycerin ..	0.19	0.25	0.50	0.13	0.85	0.20	—	0.67
Totals ..	67.47	67.29	58.02	69.09	68.94	66.87	66.10	70.41
							70.09	70.41

† Vit. B.1 included.

* B.12 only.

ANNEXE I

When the Report of the Sub-Committee came before the Standing Pharmaceutical Advisory Committee, four members of the main committee, while agreeing with the report as a whole, expressed dissent on certain particular points. These dissenting views are set out below.

Paragraph 41

Note by MR. DOBSON

My reasons for dissenting are:—

1. Assuming that the view is unanimously agreed by hospital pharmacists that the time has come in the hospital service to regularise the position of the dispensing assistant, the advice given in paragraph 41 is not good because:

(a) It excludes the option of training in Technical Schools where standards of equipment, curricula and teaching can be controlled.

(b) It gives each hospital the right to train assistants and thus there could be as many standards as there are hospitals, and the training would in many cases be undertaken by untrained teachers.

(c) Presumably the recommendation aims at producing a "practical dispenser" trained by "Rule of thumb" methods in the hospital dispensary, but it would be wrong to contemplate any system of national certification for this type of assistant whose sphere of usefulness would be limited to dispensaries of the type in which he had been trained.

2. Furthermore, it is important not to lose sight of the position of the dispensing assistant in the wider sphere of dispensing, viz. in retail pharmacy which deals with the majority of medicine supplied in the National Health Service.

(a) During the last twelve months pharmacists at their Annual General Meeting declared themselves categorically against the special recognition of dispensing assistants by the Pharmaceutical Society.

(b) Unilateral action in this matter is likely to displease the majority of pharmacists in the Contractor Service where a similar class of assistant is employed, and where after the widest publicity and consideration the profession has declared itself against the principle of special recognition being given to assistants in dispensing.

Note by MR. GILMOUR

On paragraph 41, it is my opinion that the Sub-Committee made a very wide interpretation of the terms of reference in accepting the view that the time had come to reorganise the position of the dispensing assistant in the hospital service, and I would regret the possibility of any decision having its repercussion elsewhere, more especially when there is acute dispute on the status of the dispensing assistants working in retail pharmacies under contracts with the National Health Service. Moreover, if any regard is to be paid to the decision of Members of the Pharmaceutical Society at the 1953 Annual Meeting, it would appear transparently obvious to me that the question of the status of the dispensing assistant is of such importance as to demand consideration NOT IN PART but AS A WHOLE.

In paragraph 40 the following statement occurs: "None of our witnesses suggested, and we (the sub-committee) reject ourselves any form of recognition which might be used in the future as an argument for his employment as a lower grade of pharmacist". The good intentions of the Sub-Committee are not in dispute even if I disagree with its conclusions. I submit that any decision arrived at in this case and bearing in mind the prospective development of Health Centres, cannot fail to do otherwise than have an irremediable effect on future discussions or policy regarding the dispensing assistant in retail pharmacy.

It is the official aegis conveyed in the suggestion of a conference convened by the Ministry of Health and the Department of Health for Scotland that makes my observations the more disturbing and from which in passing I note that an appropriate union affiliated to the T.U.C. is not represented.

I desire to express strong dissent with paragraph 41 of the Report.

Paragraph 41 and 42

Note by MR. SPARSHOTT

1. The recognition of dispensing assistants has been categorically rejected by the annual general meeting of the Pharmaceutical Society within the last twelve months.

2. If an examination is held and certificates are given to assistants, this to me implies recognition as a lower grade of pharmacist.

3. The persons now working as assistants seem to me to be easily identifiable by the criteria given in paragraph 30 and I fail to see the need for their examination or the regulation of their position.

4. If certificates are being given to dispensing assistants, why should they not equally be given to "skilled hands" because in the words of the report, paragraph 42, "in their own way they may be more skilled than the assistant in dispensing".

5. In my opinion too many certificates are being awarded and too many examinations are being held for insufficient reasons in these days.

6. The possible misuse of the certificate by a proprietor of a drug store must be borne in mind.

Paragraph 59

Note by MR. DOBSON

My reasons for dissenting from revised paragraph 59 are, that if adopted:—

1. There would be two standards of medical treatment for the insured person in the Health Service.

(a) A standard for the domiciliary patient in which substitution of proprietary medicines by alternative "official" medicines is not permitted, and which position is statutorily guarded by the Chemist Contractor's Terms of Service; and

(b) a standard for the hospital patient in which substitution would be permitted arbitrarily under a general authority.

This in my opinion is not a good recommendation in that:

(a) Two differing standards of professional conduct would be required of pharmacists working for the same authority in co-lateral branches of the Health Service.

(b) Substitution without the specific consent of the prescriber is a contravention of Article 16 of the Pharmaceutical Society's Statement upon Matters of Professional Conduct, and it is unfair to ask pharmacists to undertake actions which, if not properly understood, could bring them into question with their professional governing body.

(c) Pharmacists have always followed the practice that the person who has responsibility for deciding what medicine is given to a patient is the physician in charge of the case ; and

(d) It is not compatible with that responsibility that some other medicine should be substituted solely on instructions of a committee of which the prescriber may not have been a member.

2. Furthermore, I believe that such an omnibus arrangement is more likely to lead to mistakes in dispensing, especially in hospitals where there is no pharmacist in attendance, and of which there are some. This being the case, serious consequences could ensue and so pharmacists and dispensers could be exposed to risks of criticism and legal action against which they might not be fully protected.

3. The economies in drug costs and standardisation of treatments which it is claimed would be effected by the application of "substitution" would be more appropriate if sponsored by the physicians and backed by a universal reform in the writing of prescriptions.

4. That under a general authority, and unless steps are taken by the physician to re-write the treatment prescribed for his patient, it is likely that the medical records department of the hospital will advise the general practitioner of the proprietary article, and in consequence the medicine in domiciliary treatment could be different from and may differ in appearance from that given in the hospital.

Note by MR. HANBURY

While it is common practice for individual physicians to make their own arrangements with individual hospital pharmacists for the automatic substitution of non-proprietary for proprietary drugs, I consider that it is inadvisable for a general recommendation to be made on the lines envisaged in Paragraph 59. As knowledge of the action and uses of many of the newer drugs progresses it becomes clear that the influence of such factors as particle size and crystalline structure is greater than was suspected a few years ago, and in many cases it might reasonable be argued that the differing methods of preparation of such drugs result in materially different pharmacological action. There remains also the virtual certainty that sooner or later litigation will arise, whether justified or not, based upon the allegation of a patient's interests having been jeopardised as a result of substitution. The most important observation that I would wish to make on this subject is, however, the underlying attack on the use of proprietary drugs as such. It is appreciated that this attack is solely in the interests of an assumed economy, but if the discouragement of proprietary drugs were carried to its logical conclusion, involving the virtual elimination of such drugs, the whole future of pharmaceutical research in this country, and the future of those aspects of research in medicine which are closely allied to it, would be seriously jeopardised, the structure of the pharmaceutical industry and its capacity to hold its own with the industries of the United States and of the continent of Europe being closely bound up with the economics of proprietary rights. Restrictive action antagonistic to proprietary rights will lead inevitably to stagnation in pharmaceutical research and to a state of affairs in which this country will become increasingly dependent on other countries for advances in this field of medicine.

Note by MR. SPARSHOTT

1. Substitution of one medicament for another which has been ordered by a doctor is foreign to the instincts of any pharmacist and has been condemned by the Pharmaceutical Society's code of ethics.

2. Although this type of substitution may be said to be authorised by a general directive, the legal implications of such substitution have not been fully considered. New practitioners and new dispensing staff will have to be made aware of this decision upon appointment. It is possible when hospital prescriptions are dispensed outside the hospital that different coloured tablets may be supplied and the effect of this on the patient needs to be considered.

3. Sooner or later litigation will arise as a result of a complaint from a patient that his recovery has been retarded by substitution.

4. Mistakes in dispensing are much more likely to occur when something not specifically ordered has to be supplied.

5. Proprietary names have to be used in export markets and their use in this country is almost inevitable. An implied attack on medicines bearing proprietary names purely for that reason is unjustifiable.

Paragraph 72

Note by MR. DOBSON

I find the statement of the Hospital Sub-Committee on the manufacture of perfusion fluids unconvincing. There is a lack of statistical evidence to support the contention that large savings could be effected by these preparations being made in the hospital. Such figures as were presented at the Standing Advisory Committee meeting showed wide variations in the costing employed and output in relation to wage cost. There was nothing to indicate that like was being compared with like as between the two hospitals, or the manufacturers' costs or quality and standard of products.

The recommendation arising from this paragraph should in my submission receive further consideration and critical examination by independent costing experts before becoming general advice to Hospital Management Committees.

Note by MR. HANBURY

In regard to the manufacture of perfusion fluids, I am of the opinion that the recommendations of the Sub-Committee are based upon inadequate data and that estimates of the cost of carrying out these operations on a small scale are incomplete and contradictory. No evidence has been taken either on the technical or the economic aspects of large scale production and no valid conclusions can be drawn without the availability of such information. I consider that the most economic procedure for the manufacture of perfusion fluids can only be determined when the relevant data has been properly assessed by persons who can examine the whole question objectively, and without prejudice either for or against any particular scale or method of production.

Note by MR. SPARSHOTT

I am satisfied that the recommendation of the committee is based upon incomplete data, for example, no provision is made for the cost of testing the finished product and I am not satisfied that overheads have been correctly apportioned. Before this recommendation is implemented a more complete investigation is needed.

ANNEXE II

Comments by the Standing Medical Advisory Committee

The Central Health Services Council endorsed the report on Hospital Pharmaceutical Services, taking into account the following comments on it by the Standing Medical Advisory Committee :

(1) Greater emphasis might be placed on the importance of the pharmacist's responsibility for ensuring the safe custody of dangerous drugs. For example, the statement at the end of paragraph 6 that "The Pharmacy Acts and the Dangerous Drugs Acts impose certain statutory responsibilities upon pharmacists in hospitals" *appears* to be contradicted by the statement in paragraph 24 that "There is no activity of the pharmaceutical department of a hospital which can by statute be undertaken only by a pharmacist". The situation, we are informed, is that where a registered pharmacist is employed, the responsibility falls on him but legislation provides alternative arrangements for hospitals in which a registered pharmacist is not employed.

(2) It would be of great value if the Standing Pharmaceutical Advisory Committee could in general terms indicate staffing criteria for hospital pharmaceutical departments; this would amongst other things involve indicating the desirable proportions of qualified pharmacists, assistants and skilled hands.

(3) On paragraph 45, it seems desirable that there should be some direct contact between the pharmacist and student nurses during their training, perhaps by way of one or more lectures given by the pharmacist.

(4) Paragraph 46 of the report might be improved if it recommended that consultation with the pharmacist should extend to responsible sisters or nurses in charge as well as to the matron.

(5) It is most desirable that the nursing staff should be fully informed of the possible effects of new drugs and this should be secured by arranging for an appropriate member of the hospital staff from time to time to give a lecture to the nursing staff on new drugs.

(6) It might help to meet the objections to paragraph 59 of the report, recorded in Annexe I, if hospitals ensured that the reports sent to general practitioners at the time of a patient's discharge specified the actual preparation which had been used during treatment in hospital, and if also the hospital pharmacist when he substituted the official equivalent for a proprietary preparation wrote on the prescription the official name of the drug substituted. The latter step would contribute towards the long-term objective of ensuring that practitioners should prescribe and refer to in clinical notes only the drug actually dispensed.